COUNTY COUNCIL

OF

HARFORD COUNTY, MARYLAND

BILL NO. 08-03

Introduced by Council President Boniface at the request of the County Executive

Legislative Day No. 08-02 Date January 15, 2008

AN ACT to repeal and re-enact, with amendments, Chapter 82, Building Construction, of the Harford County Code, as amended; to provide that Harford County shall adopt as its standard for building regulations the 2006 International Building Code and the 2006 International Residential Code with certain amendments thereto; to further provide penalties for the violation of the building standards; and generally relating to buildings and construction in Harford County, Maryland.

By the Council, January 15, 2008

Introduced, read first time, ordered posted and public hearing scheduled

on: February 12, 2008

at: 6:30 p.m.

By Order: Barbara J. O'Connor, Council Administrator

PUBLIC HEARING

Having been posted and notice of time and place of hearing and title of Bill having been published according to the Charter, a public hearing was held on February 12, 2008, and concluded on, February 12, 2008.

Barbara J. O'Connor, Council Administrator

EXPLANATION: CAPITALS INDICATE MATTER ADDED TO EXISTING LAW. [Brackets] indicate matter deleted from existing law. Underlining indicates language added to Bill by amendment. Language lined through indicates matter stricken out of Bill by amendment.

Section 1. Be It Enacted By The County Council of Harford County, Maryland, that Chapter 82, Building Construction, of the Harford County Code, as amended, be, and it is hereby, repealed and re-enacted, with amendments, all to read as follows:

Chapter 82. Building Construction

ARTICLE I. [2003]2006 International Building Code

§ 82-1. Adoption of [2003]2006 International Building Code by reference.

A. The [2003]2006 International Building Code (hereinafter referred to as the Building Code, or code) published by the International Code Council, Inc., is hereby adopted and by reference thereto is made a part of this chapter with the same force and effect as though set out in full herein, save and except such changes, amendments, revisions, deletions, subsections and/or additions as are specified in this chapter. If conflicts with this code, or with changes, amendments, revisions, deletions, subsections, and/or additions to that code are found elsewhere in the County Code, the most restrictive provisions shall govern.

B. At least one copy of this code and supplements thereto shall be on file and open for public use, examination and inspection in the office of the Director of Administration and in the office of the Council Administrator.

§ 82-2. Modifications.

A. Definitions.

(1) As used in this code, the term "building official" means the Director of the Department of Inspections, Licenses and Permits.

(2) As used in this code, the term "Department of Building Safety" means the Department of Inspections, Licenses and Permits.

(3) As used in this code, the term "Harford County Hazardous Materials Team" means the Harford County Hazardous Materials Team as created by the Harford County Division of Emergency Operations.

(4) As used in this code, the term "ICC Electrical Code" means the Harford County Electrical Code, Chapter 105 (Article I, Section 105-3, *et seq.*) of the Harford County Code.

(5) As used in this code, the term "International Fuel Gas Code" means the Harford County Plumbing Code, Chapter 202 (Section 202-1, *et seq.*) of the Harford County Code.

(6) As used in this code, the term "International Plumbing Code" means the Harford County Plumbing Code, Chapter 202 (Section 202-1, *et seq.*) of the Harford County Code.

(7) As used in this code, the term "ICC/ANSI 117.1" means the Maryland Accessibility Code set forth in Code of Maryland Regulations, Title 5, Subtitle 05.02.02.

B. The following sections are changes or additions to certain sections of the [2003]2006 International Building Code.

(1) Subsection 101.1 is hereby amended by substituting "Harford County, MARYLAND" for "name of jurisdiction" in the second line.

(2) Subsection 101.2 is amended by adding the following exceptionS:

"2. EXISTING BUILDINGS UNDERGOING REPAIR, ALTERATIONS OR ADDITIONS AND CHANGE OF OCCUPANCY SHALL BE PERMITTED TO COMPLY WITH THE 2006 INTERNATIONAL EXISTING BUILDING CODE.

3. Existing buildings as defined in COMAR 05.16.01.03B(22) undergoing repair, alterations or additions, and change of occupancy may comply with the Maryland Building Rehabilitation Code (MBRC) set forth in COMAR 05.16.01-.08."

(3) Subsection 101.2.1 is deleted and the following is inserted in lieu thereof:

"101.2.1 Appendices. Provisions in Appendix B, Board of Appeals; Appendix C, Group U – Agricultural Buildings; Appendix F, Rodent Proofing; and Appendix I, Patio Covers, are adopted as part of the Harford

County Building Code."

(4) Subsection 101.4.1 is deleted.

(5) Subsection 101.4.2 is deleted.

(6) Subsection 101.4.4 is deleted.

(7) Subsection 101.4.5 is deleted.

(8) Subsection 102.6 is amended by deleting "the International Property Maintenance Code" starting in the fourth line.

(9) Subsection 103.3 is amended by deleting the last sentence: "For the maintenance of existing properties, see the International Property Maintenance Code."

(10) Subsection 104.6 is amended by adding a new sentence at the end of the section: "Nothing in this section shall be deemed to restrict or otherwise limit the provisions of Section 1-18 of the Harford County Code."

(11) New Subsection 104.12 is added as follows:

"104.12 Restriction of employees. An official or employee connected with the Department of Building Safety, except one whose only connection is that of a member of the Board of Appeals established under the provisions of Appendix B, shall not be engaged in or directly or indirectly connected with the furnishing of labor, materials or appliances for the construction, alteration or maintenance of a building, or the preparation of construction documents thereof, unless that person is the owner of the building; nor shall such officer or employee engage in any work that conflicts with official duties or with the interests of the department."

(12) Subsection 105.1.1 is deleted.

(13) Subsection 105.1.2 is deleted.

(14) Subsection 105.2 is amended by deleting subheadings "Electrical," "Gas" and

"Plumbing" and by amending subheading "Building" by adding and modifying the following sub-items[.]:

"1. The provisions of this code shall not apply to structures not more than one story in height and are 200 square feet or less in area and are not classified as use Group H, High Hazard.

14. The provisions of this code shall not apply to the construction, alteration or modification of an agricultural building, as defined in Section 202 and as identified in Appendix C, Subsection C101.1. A legally existing agricultural building shall not be considered as a 'change of occupancy' that requires a building permit if the subordinate use is in accordance with the limitations set forth in Sections 302.2 and 302.2.1. The provisions of this code shall also not apply to an agricultural use area located within an agricultural building on the level of exit discharge, not greater than 3,000 square feet in area, and the agricultural use area does not exceed the tabular values in Table 503 for the allowable height or area of such use.

15. One story detached accessory structures to use Group R-3, provided the floor area does not exceed 200 square feet.

16. The provisions of this code respecting agricultural building permit requirements shall be as set forth in the attached table entitled 'Agricultural Building Permit Requirements Table.'"

[(15) Subsection 105.2.2 is deleted and the following is inserted in lieu thereof:

"105.2.2 Repairs. Application or notice to the building official is not required for ordinary repairs to structures. Such repairs shall not include the cutting away of any load bearing wall, partition or portion thereof, the

removal or cutting of any structural beam or load bearing support, or the removal or change of any required means of egress, or rearrangement of parts of a structure affecting the egress requirements; nor shall ordinary repairs include addition to, alteration of, replacement or relocation of any standpipe, mechanical or other work affecting public health or general safety."]

([16]15) Subsection 105.5 is amended by deleting "180 days" in the third line and inserting "12 months" in lieu thereof.

([17]16) New Subsection 105.6.1 is added as follows:

"105.6.1 Withholding permits. The building official may withhold the issuance of any permit and/or place a hold on inspections if the applicant, the owner or any individual listed on the application as a responsible officer (if the applicant is a business entity) has failed to remedy or correct any existing/alleged violation of the Harford County Code on any construction projects in Harford County for which the applicant has been cited by any County agency."

([18]17) Subsection 108.2 is deleted and the following is inserted in lieu thereof:

"108.2 Schedule of permit fees. On buildings, structures, mechanical systems or alterations requiring a permit, a fee for each permit shall be paid as required, in accordance with Chapter 157 of the Harford County Code."

([19]18) New Subsection 109.1.1 is added as follows:

"109.1.1 Purpose of inspections. All inspections conducted by the Department of Inspections, Licenses and Permits are performed for the protection and promotion of public safety, health and welfare. The inspections are made solely for the public benefit and are not to be construed

as providing any warranty of construction to individual members of the public."

([20]19) New Subsection 109.3.8.1 is added as follows:

"109.3.8.1 Hazardous materials inspections. As deemed necessary by the building official, approval from the Harford County Hazardous Materials Team may be required prior to a certificate of occupancy being issued."

([21]20) New Subsection 109.7 is added as follows:

"109.7 Standards. All buildings, structures and appurtenances thereto shall be constructed strictly in compliance with accepted engineering practice. All members and components of the structure shall be installed, fitted or fastened, moved or stored in such a manner that the full structural capabilities of the members are obtained. Improper alignment (level and square), fitting, fastening or methods of construction shall be considered a violation of this code."

([22]21) Subsection 110.3 is amended by adding the following at the end of the Subsection: "Any person, firm or corporation engaged in the process of selling property in which a temporary certificate of occupancy is issued shall at the time of settlement present to the buyer a copy of the temporary certificate of occupancy which must include a list of deficiencies that remain to be corrected."

([23]22) Subsection 113.4 is amended by deleting the phrase "shall be subject to penalties as prescribed by law" in the last line and inserting the following in lieu thereof: "shall be guilty of a misdemeanor, punishable by a fine of not more than one thousand dollars ($1,000.00) or by imprisonment not exceeding ninety days, or both such fine and imprisonment. Each day that a violation continues shall be deemed a separate offense."

([24]23) Subsection 115.3 is deleted and the following is inserted in lieu

thereof:

"**115.3 Notice.** If an unsafe condition is found, the building official shall serve on the owner, agent or person in control of the structure, a written notice of violation that describes the condition deemed unsafe and specifies the required repairs or improvements to be made to abate the unsafe condition or to demolish the unsafe structure within a (specified period of) stipulated time.

Unless the person served with an order makes a timely request for a hearing pursuant to Section 115.7, the order becomes a final order on the eleventh day after service.

If a person who has been issued an order under this section makes a timely request for a hearing, i.e., requests a hearing within ten days from service in accordance with Section 115.7, the order becomes a final corrective order if the Director of Administration affirms the order following the hearing."

([25]24) New Subsection 115.6 is added as follows:

"**115.6 Abatement.** If a person who has been issued an order under this section fails, within the time limit specified in a notice of violation or order, to abate the unsafe condition as directed, the Department of Building Safety may take whatever abatement action that may be necessary by use of county employees and equipment and/or by contract with private contractors. The cost and expense of abating the unsafe condition shall be certified by the Department of Building Safety to the County Treasurer together with the name of the owner of the property on which the violation occurred as determined from the property tax assessment records. These charges shall

constitute a lien upon the real property and shall be collectible in the same manner as real property taxes with the same priority, interest and penalties. Initiation of abatement action shall not preclude the issuance of any other action or legal proceedings authorized or permitted under this code, the laws of the State of Maryland and the common law."

([26]25) New Subsection 115.6.1 is added as follows:

"115.6.1 Notice of abatement action. The Department of Building Safety, before or within ten days after commencement of any abatement action, shall issue a notice of abatement action to the owner of the property on which the abatement action has been or will be commenced. The notice shall describe the abatement action to be undertaken and shall specify that the costs for the action shall constitute a lien on the real property of the owner.

Service of the notice of abatement action issued by the Department of Building Safety shall be served as provided for by Subsection 115.4 of this code."

([27]26) New Subsection 115.7 is added as follows:

"115.7 Hearing. The property owner or agent receiving a notice of violation issued under Subsection 115.3, a notice of abatement issued under Section 115.6.1 or a lien upon the real property may request a hearing within ten days from the receipt or posting of such notice or lien issued by the Department of Building Safety. The request must be in writing and served personally on the Director of Administration or by certified mail, return receipt requested, bearing a postmark from the United States Postal Service.

The Director of Administration may subpoena anyone having any connection with a hearing under this section as a witness or to give evidence

relating to a notice of violation. A subpoenaed witness who is not an employee of the Harford County Government shall receive the same fees and mileage reimbursement as if the hearing were a part of a civil action in the Circuit Court of Maryland."

([28]27) New Subsection 115.8 is added as follows:

"**115.8 Finality of lien.** Unless a person served with a notice of abatement makes a timely request for a hearing pursuant to Subsection 115.7, the lien shall become final on the property upon completion of the work. If a person makes a timely request for a hearing, any lien on the property shall become final after completion of all the work the Director of Administration determines was properly conducted by way of abatement action."

([29]28) New Section 116 is added as follows:

"116. EMERGENCY MEASURES.

116.1 Imminent danger. When, in the opinion of the building official, there is imminent danger of failure or collapse of a building or structure or any part thereof which endangers life, or when any structure or part of a structure has fallen and life is endangered by the occupation of the building or structure, the building official is hereby authorized and empowered to order and require the occupants to vacate the same forthwith. The building official shall post at each entrance of such structure a notice reading as follows: 'This structure is unsafe and its occupancy has been prohibited by the building official. It shall be unlawful for any person to enter such structure except for the purpose of making the required repairs or of demolishing the same.'

116.2 Temporary safeguards. When, in the opinion of the building official, there is imminent danger due to an unsafe condition, the building

official shall cause the necessary work to be done to render such structure temporarily safe, whether or not the legal procedure herein described has been instituted.

116.3 Closing streets. When necessary for public safety, the building official shall temporarily close structures and close, or order the authority having jurisdiction to close, sidewalks, streets, public ways and places adjacent to unsafe structures and prohibit the same from being used.

116.4 Emergency repairs. For the purposes of this section, the building official shall employ the necessary labor and materials to perform the required work as expeditiously as possible.

116.5 Costs of emergency repairs. Costs incurred in the performance of emergency work shall be paid from the treasury of the jurisdiction on approval of the building official. The legal counsel of the jurisdiction shall institute appropriate action against the owner of the premises where the unsafe structure is or was located to recover the costs incurred by the jurisdiction for the performance of the emergency work.

116.6 Unsafe equipment. Equipment deemed unsafe by the building official shall not be operated after the date stated in the written notice unless the required repairs or changes have been made and the equipment has been approved, or unless an extension of time has been secured from the building official in writing.

116.6.1 Authority to seal equipment. In the case of an emergency, the building official shall have the authority to immediately seal out of service any unsafe device or equipment regulated by this code.

116.6.2 Unlawful to remove seal. Any device or equipment sealed out of

service by the building official shall be plainly identified in an approved manner. The identification shall not be tampered with, defaced or removed except by the building official and shall indicate the reason for such sealing."

([30]29) Section 202 is amended by deleting the definition of "agricultural, building" and inserting the following in lieu thereof:

"**Agricultural, Building.** A structure located on land zoned agricultural which is designed and constructed to house farm implements, hay, grain, poultry, livestock or other horticultural products. This structure shall not be a place of human residence."

([31]30) Subsection 302.2 is amended by adding the following exception:

"**Exception.** An accessory agricultural use area located within an agricultural building shall be on the level of exit discharge, shall not be greater than 3,000 square feet in area, and the accessory agricultural use area does not exceed the tabular values in Table 503 for the allowable height or area for such use."

([32]31) Subsection 406.1.4 is amended by deleting in item 1 "1/2-inch (12.7 mm)" and inserting in lieu thereof "5/8-inch (15.9 mm)" in the third line [and inserting "all doors shall be equipped with a self closing device." between "715.3.3" and "openings" in the eleventh line].

([33]32) Subsection 501.2 is deleted and the following is inserted in lieu thereof:

"501.2 Premises identification. Address numbers shall be provided on new or renovated buildings as required by Chapter 84 of the Harford County Code."

[(34) Subsection 504.2 is deleted and the following is inserted in lieu thereof:

"**504.2 Automatic sprinkler increase.** For buildings protected throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1, the values specified in Table 503 for maximum height are increased by 20 feet (6096 mm), and the maximum number of stories is increased by one story. These increases are permitted in addition to an area increase in accordance with Section 506.2 and 506.3. When the building is equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.2. For Groups R-1, R-2, and R-4 and in accordance with Section 903.3.1.3 for Group R-3, the building height limitations specified in Table 503 are increased one story and 20 feet (6096 mm) but may not exceed a height of four stories and 60 feet (18288 mm) above the grade plane. These increases are permitted in addition to the area increase."]

([35]33) Subsection 705.6 is amended by adding Exception 6.

"6. In Groups R-2 and R-3 as applicable in Section 101.2, walls are permitted to terminate at the roof sheathing or deck in buildings of construction types III, IV and V if the building is equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2 for Group R-2, and 903.3.1.1, 903.3.1.2 or 903.3.1.3 for Group R-3."

(34) NEW SECTION 913 IS ADDED AS FOLLOWS:

"**SECTION 913**

CARBON MONOXIDE DETECTORS

913.1 CARBON MONOXIDE DETECTORS. CARBON MONOXIDE DETECTORS SHALL BE INSTALLED AS REQUIRED BY THE PUBLIC

SAFETY ARTICLE, TITLE 12, SUBTITLE 11 OF THE ANNOTATED CODE OF MARYLAND."

([36]35) Subsection 1009.3 is amended by deleting Exception [5]4 and inserting the following in lieu thereof:

"[5]4. In occupancies in Group R-3, as applicable in Section 101.2, within dwelling units in occupancies in Group R-2, as applicable in Section 101.2, and in occupancies in Group U, which are accessory to an occupancy in Group R-3, as applicable in Section 101.2, the maximum riser height shall be 8-1/4 inches (209.5 mm) and the minimum tread depth shall be 9 inches (228.6 mm), the minimum winder tread depth at the walk line shall be 9 inches (229 mm) and the minimum winder tread depth shall be 6 inches (152 mm). A nosing not less than .075 inches (19.1 mm) but not more than 1.25 inches (32 mm) shall be provided on stairways with solid risers where the tread depth is less than 11 inches (279 mm)."

([37]36) [Chapter 11 is deleted. The Maryland Accessibility Code as set forth in Code of Maryland Regulations 05.02.02 applies.] SUBSECTION 1101.2 IS DELETED AND THE FOLLOWING IS INSERTED IN LIEU THEREOF:

"1101.2 DESIGN. BUILDINGS AND FACILITIES SHALL BE DESIGNED AND CONSTRUCTED TO BE ACCESSIBLE IN ACCORDANCE WITH COMAR 05.02.02.

EXCEPTION: THE DEISGN OF COVERED MULIT-FAMILY DWELLINGS AS SET FORTH IN COMAR 05.02.02.05B(9) SHALL BE IN ACCORDANCE WITH THIS CHAPTER AND ICC A117.1."

(37) NEW SUBSECTION 1106.8 IS ADDED AS FOLLOWS:

"1106.8 IDENTIFICATION. EACH ACCESSIBLE PARKING SPACE PROVIDED SHALL BE IDENTIFIED AS SET FORTH IN COMAR 05.02.02.07D."

(38) Figure 1608.2 is amended by adding the following note:

"1. The ground snow load, p_g, for Harford County, Maryland shall be 30 psf."

(39) Subsection 1612.3 is amended by deleting "insert name of jurisdiction" in the seventh line and inserting in lieu thereof "Harford County, MARYLAND" and by deleting "insert date of issuance" starting in the seventh line and inserting in lieu thereof "January 7, 2000".

(40) New Subsection 1805.2.1.1 is added as follows:

"1805.2.1.1 Establishment of frost line. The frost line shall be established at 30" (762 mm) below the finished grade."

(41) Chapter 29 is deleted. Chapter 202 of the Harford County Code applies.

(42) New Subsection 3001.2.1 is added as follows:

"3001.2.1 Maryland State Elevator Code. The provisions of this code are in addition to the requirements in the Maryland State Elevator Code. If a conflict between this code and the state code exists, the requirements in the state code shall apply."

(43) SUBSECTION 3103.1 IS AMENDED BY ADDING "WITHIN ANY 365 CONSECUTIVE DAY PERIOD" AFTER THE WORD "DAYS" IN THE SECOND AND FOURTH LINES.

([43]44) Subsection 3103.1.1 is amended by deleting "120 square feet (11.16 mm)" in the second line and inserting in lieu thereof "350 square feet (32.55 mm)" and by deleting "10" in the fifth line and inserting in lieu thereof "50".

([44]45) New Subsection 3301.3 is added as follows:

"**3301.3 Housekeeping.** Rubbish and trash shall not be allowed to accumulate on construction sites and shall be removed as soon as conditions warrant. Combustible rubbish shall be removed promptly and shall not be disposed of by burning on the premises or in the immediate vicinity. The entire premises and area adjoining around the operation shall be kept in a safe and sanitary condition."

([45]46) Subsection 3401.3 is amended by deleting "International Property Maintenance Code, International Private Sewage Disposal Code" starting in the [fifth] SIXTH line.

([46]47) Subsection 3410.2 is amended by deleting "[date to be inserted by the jurisdiction. Note: It is recommended that this date coincide with the effective date of building codes within the jurisdiction]" and inserting in lieu thereof "March 1, 1968".

ARTICLE II. [2003]2006 International Residential Code

§ 82-3. Adoption of [2003]2006 International Residential Code by reference.

A. The [2003]2006 International Residential Code published by the International Code Council, Inc., is hereby adopted and by reference thereto is made a part of this chapter with the same force and effect as though set out in full herein, save and except such changes, amendments, revisions, deletions, subsections and/or additions as specified in this chapter. If conflicts with this code, or with changes, amendments, revisions, deletions, subsections and/or additions to that code are found elsewhere in the County Code, the most restrictive provisions shall govern.

B. At least one copy of this code and supplements thereto shall be on file and open for public use, examination and inspection in the office of the Director of Administration and in the office of the Council Administrator.

§ 82-4. Modifications.

The following sections are changes or additions to certain sections of the [2003]2006 International Residential Code:

(1) Subsection R101.1 is amended by deleting "name of jurisdiction" and inserting in lieu thereof "Harford County, MARYLAND".

(2) Subsection R102.5 is deleted and the following is inserted in lieu thereof:

"R102.5 Appendices. Provisions in Appendix A, Sizing and Capacities of Gas Piping; Appendix B, Sizing of Venting Systems Serving Appliances Equipped with Draft Hoods, Category I, Appliances, and Appliances listed for use and Type B vents; Appendix C, Exit Terminals of Mechanical Draft and Direct-vent Venting Systems; Appendix D, Recommended Procedure for Safety Inspection of an Existing Appliance Installation; Appendix E, Manufactured Housing Used as Dwellings; Appendix G, Swimming Pools, Spas and Hot Tubs; Appendix H, Patio Covers; Appendix J, Existing Buildings and Structures; and Appendix K, Sound Transmission, shall be deemed as part of this code."

(3) New Subsection R101.4 is added as follows:

"R101.4 Safeguards during construction. The provisions of Chapter 33 of the [2003]2006 International Building Code as adopted by Article I of this chapter shall be applicable to all construction sites possessing a valid building permit."

(4) Sections R103 through R114 of the [2003]2006 International Residential Code are deleted and Sections 102 through 116 of the [2003]2006 International Building Code, as amended, shall be applicable.

(5) Section R202 is amended by deleting the definition of "manufactured home" and inserting in lieu thereof:

"**Manufactured home**: Manufactured home means a structure, transportable in one or more sections, which in the traveling mode is eight body feet or

more in width or forty body feet or more in length or, when erected on site, is three hundred twenty or more square feet, and which is built on a permanent chassis and designed to be used as a dwelling with or without a permanent foundation when connected to the required utilities, and includes the plumbing, heating, air-conditioning and electrical systems contained therein. Calculations used to determine the number of square feet in a structure will be based on the structure's exterior dimensions measured at the largest horizontal projections when erected on site. These dimensions will include all expandable room, cabinets and other projections containing interior spaces, but do not include bay windows. This term includes all structures which meet the above requirements except the size requirements and with respect to which the manufacturer voluntarily files a certification pursuant to §3282.13 and complies with the standards set forth in Part 3280.

Note: for mobile homes built prior to June 15, 1976, a label certifying compliance to the standard for mobile home, NFPA 501, ANSI 119.1, in effect at the time of manufacture is required. For the purpose of these provisions, a mobile home shall be considered a manufactured home."

(6) Table R301.2(1) is amended by adding the following design values: "[roof] GROUND snow load - 30 psf; wind - 90 mph, seismic design category - b; weathering - severe; frost line depth – 30 inches (762 mm); termite - moderate to heavy; decay - slight to moderate; winter design temp - 13^{O} F; ice shield underlayment required – no; Flood Hazards - July 16, 1981 and January 7, 2000; air freezing index - 554; mean annual temp - 31^{O} F".

[(7) Table R301.5 is amended by deleting "40" in the third line for decks and inserting in lieu thereof "60".

(8) Subsection R302.1 is amended by deleting "R105.2" in the second line of the

last exception and inserting in lieu thereof "105.2 of the 2003 International Building Code, as amended by Harford County".]

([9]7) New Subsection R302.1.[2]1 is added as follows:

"R302.1.[2]1 Balconies, decks, porches or similar appendages. Balconies, decks, porches or similar appendages attached to townhouses and constructed with combustible materials shall not be located closer than 24 inches (609.6 mm) to any property line."

[(10) Subsection R303.6.1 is amended by numbering the existing exception as "1" and adding the following:

"2. Interior stairs consisting of less than six risers."]

([11]8) Subsection R309.1 is amended by adding "and shall be equipped with a self closing device" after the word "doors" in the last line.

([12]9) Subsection R309.2 is amended by deleting "1/2-inch (12.7mm)" and inserting in lieu thereof "5/8-inch (15.9mm) fire code" in the second [and], eighth AND TENTH lines.

[(13) Subsection R310.1 is amended by deleting "basements with habitable space and every" starting in the first line and inserting in lieu thereof "every".]

([14]10) Subsection R311.2.2 is amended by adding the following exception:

"**Exception.** Enclosed accessible spaces under stairs when protected by an automatic sprinkler system installed in accordance with Section 903.3.1.3 of the [2003]2006 International Building Code."

([15]11) Section R311.5.3.1 is amended by deleting "7¾ inches (196 mm)" in the second line and replacing with "8¼ inches (209.5 mm)".

([16]12) Section R311.5.3.2 is deleted and the following is inserted in lieu thereof:

"R311.5.3.2 Tread depth. The minimum tread depth shall be 9 inches (299

mm). The tread depth shall be measured horizontally between the vertical planes of the foremost projection of adjacent treads and at a right angle to the tread's leading edge. The greatest tread depth within any flight of stairs shall not exceed the smallest by more than 3/8 inch (9.5mm). Winder treads shall have a minimum tread depth of 9 inches (299 mm) measured as above at a point 12 inches (305 mm) from the side where the treads are narrower. Winder treads shall have a minimum tread depth of 6 inches (152 mm) at any point. Within any flight of stairs, the greatest winder tread depth at the 12 inch (305 mm) walk line shall not exceed the smallest by more than 3/8 inch (9.5 mm)."

([17]13) Subsection R311.5.3.3 Exception 1 is amended by deleting "11 inches (279 mm)" in line two and inserting in lieu thereof "10 inches (254 mm)".

([18]14) New Subsection R312.1.1 is added as follows:

"R312.1.1 Areaway guards. A guardrail or other approved barrier shall be installed on areaway walls with a grade level elevation difference of greater than 48 inches (1219.2 mm). Guards shall be constructed in accordance with Section R312[.2]."

([19]15) Subsection R321.1 is deleted and the following is inserted in lieu thereof:

"R321.1 Premises identification. Address numbers shall be provided on new or renovated buildings as required in Chapter 84 of the Harford County Code."

(16) NEW SECTION R325 IS ADDED AS FOLLOWS:

"SECTION R325

CARBON MONOXIDE DETECTORS

R325.1 CARBON MONOXIDE DETECTORS. CARBON MONOXIDE DETECTORS SHALL BE INSTALLED AS REQUIRED BY THE PUBLIC SAFETY ARTICLE, TITLE 12, SUBTITLE 11 OF THE ANNOTATED CODE OF MARYLAND."

(17) SUBSECTION R404.1, TABLE R404.1(1), TABLE R404.1(2) AND TABLE R404.1(3) ARE DELETED AND THE FOLLOWING IS INSERTED IN LIEU THEREOF:

"**R404.1 CONCRETE AND MASONRY FOUNDATION WALLS.** CONCRETE AND MASONRY FOUNDATION WALLS SHALL BE SELECTED AND CONSTRUCTED IN ACCORDANCE WITH THE PROVISIONS OF SECTION R404 OR IN ACCORDANCE WITH ACI 318, ACI 332, NCMATR68–A OR ACI 530/ASCE 5/TMS 402 OR OTHER APPROVED STRUCTURAL STANDARDS. WHEN ACI 318, ACI 332 OR ACI 530/ASCE 5/TMS 402 OR THE PROVISIONS OF SECTION R404 ARE USED TO DESIGN CONCRETE OR MASONRY FOUNDATION WALLS, PROJECT DRAWINGS, TYPICAL DETAILS AND SPECIFICATIONS ARE NOT REQUIRED TO BEAR THE SEAL OF THE ARCHITECT OR ENGINEER RESPONSIBLE FOR DESIGN, UNLESS OTHERWISE REQUIRED BY THE STATE LAW OF THE JURISDICTION HAVING AUTHORITY."

([20]18) Subsection R405.1 is amended by adding "in accordance with the Harford County Plumbing Code" after the word "system" in the seventh line.

([21]19) Subsection R405.1 is amended by deleting the exception at the end of the subsection.

([22]20) Subsection R506.2.2 is amended by deleting the exception at the end

of the subsection.

(21) SUBSECTIONS R602.10 THROUGH R602.11.3 ARE DELETED AND THE FOLLOWING SUBSECTIONS ARE INSERTED IN LIEU THEREOF:

"**R602.10 WALL BRACING.** ALL EXTERIOR WALLS SHALL BE BRACED IN ACCORDANCE WITH THIS SECTION. IN ADDITION, INTERIOR BRACED WALL LINES SHALL BE PROVIDED IN ACCORDANCE WITH SECTION R602.10.1. WHERE A BUILDING, OR PORTION THEREOF, DOES NOT COMPLY WITH ONE OR MORE OF THE BRACING REQUIREMENTS IN THIS SECTION, THOSE PORTIONS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICE.

EXCEPTION: DETACHED ONE-AND TWO-FAMILY DWELLINGS LOCATED IN SEISMIC DESIGN CATEGORY C ARE EXEMPT FROM THE SEISMIC BRACING REQUIREMENTS OF THIS SECTION. WIND SPEED PROVISIONS FOR BRACING SHALL BE APPLICABLE TO DETACHED ONE- AND TWO-FAMILY DWELLINGS.

R602.10.1 BRACED WALL LINES. BRACED WALL LINES, BOTH INTERIOR AND EXTERIOR, SHALL BE PROVIDED WITH BRACED WALL PANELS IN THE PERCENTAGE AND LOCATION SPECIFIED IN THIS SECTION. BRACED WALL PANELS SHALL BE IN ACCORDANCE WITH ONE OF THE BRACING METHODS SPECIFIED IN SECTION R602.10.2, THE ALTERNATE BRACED WALL METHOD OF SECTION R602.10.3.2, OR THE CONTINUOUS STRUCTURAL

PANEL SHEATHING METHOD OF SECTION R602.10.4. BRACING METHOD SHALL BE PERMITTED TO VARY AS FOLLOWS:

1. VARIATION IN BRACING METHOD FROM STORY TO STORY IS PERMITTED.
2. VARIATION IN BRACING METHOD FROM BRACED WALL LINE TO BRACED WALL LINE WITHIN A STORY IS PERMITTED, EXCEPT THAT CONTINUOUS STRUCTURAL PANEL SHEATHING SHALL CONFORM TO THE ADDITIONAL REQUIREMENTS OF SECTION R602.10.4.
3. IN SEISMIC DESIGN CATEGORIES A AND B, AND DETACHED DWELLINGS IN SEISMIC DESIGN CATEGORY C, VARIATION IN BRACING METHOD WITHIN A BRACED WALL LINE IS PERMITTED. THE REQUIRED SHEATHING PERCENTAGE FOR THE BRACED WALL LINE WITH MIXED SHEATHING TYPES SHALL HAVE THE HIGHER BRACING PERCENTAGE, IN ACCORDANCE WITH TABLE R602.10.1(1), OF ALL TYPES OF BRACING USED. WALL LINES USING CONTINUOUS WOOD STRUCTURAL PANEL SHEATHING SHALL CONFORM TO THE ADDITIONAL REQUIREMENTS OF SECTION R602.10.4.

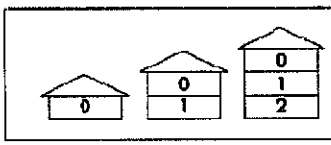
R602.10.1.1 PERCENTAGE OF BRACING. THE PERCENTAGE OF BRACING ALONG EACH BRACED WALL LINE SHALL BE IN ACCORDANCE WITH TABLE R602.10.1(1) AND SHALL BE THE

GREATER OF THAT REQUIRED BY THE SEISMIC DESIGN CATEGORY OR THE DESIGN WIND SPEED. ADJUSTMENTS TO THE PERCENT OF BRACED WALL SPECIFIED IN TABLE R602.10.1(1) SHALL BE AS SPECIFIED IN TABLE R602.10.1(2).

TABLE R602.10.1(1)[a,b,c]
WALL BRACING

SEISMIC DESIGN CATEGORY (SDC) OR WIND SPEED	STORIES ABOVE BRACED WALL LINE[d]	METHOD OF BRACING PERMITTED	PERCENTAGE OF FULL-HEIGHT BRACING PER WALL LINE		MAXIMUM SPACING BETWEEN BRACED WALL LINES (FT)
			For Method 3 Bracing	For other methods permitted[c]	
SDC A and B (S_s 0.35g and S_{ds} 0.33g), 100 mph	0	Methods 1-8	16%	16%	35 (See Section R602.10.1.4 for exceptions)
	1	Methods 1-8	16%	25%	
	2	Methods 2-8	25%	35%	
SDC C (S_s 0.6g and S_{ds} 0.53g), < 110 mph	0	Methods 1-8	16%	25%	
	1	Methods 2-8	30%	45%	
	2	Methods 2-8	45%	60%	
SDC D_2 & D_1 (S_s 1.25g and S_{ds} 0.83g), < 110 mph	0	Methods 2-8	20%	30%	25 (See Section R602.10.1.4.1 for exceptions)
	1	Methods 2-8	45%	60%	
	2	Methods 2-8	60%	85%	
SDC D_2, < 110 mph	0	Methods 2-8	25%	40%	
	1	Methods 2-8	55%	75%	
	Cripple wall	Method 3	75%	Not Permitted	

a. Wall bracing percentages are based on a soil site class "D." Interpolation of bracing percentage between the S_{ds} values associated with the Seismic Design Categories shall be permitted when a site-specific S_{ds} value is determined in accordance with Section 1613.5 of the *International Building Code*.
b. Foundation cripple wall panels shall be braced in accordance with Section R602.10.8.
c. Methods of bracing shall be as described in Section R602.10.2. The alternate braced wall panels described in Section R602.10.3.2 shall also be permitted
d. Stories above braced wall line. 0 = one story or top of two or three story. 1 = first story of two story or second story of three story. 2 = first story of three story.



0 = one story or top of two- or three-story
1 = first story of two-story or second story of three-story
2 = first story of three-story

e. Method 1 bracing exempt from percentage bracing requirement.

TABLE R602.10.1(2)
ADJUSTMENT FACTORS TO THE PERCENTAGE OF REQUIRED WALL BRACING [a]

ADJUSTMENT BASED ON:			MULTIPLY PERCENTAGE OF BRACING PER WALL LINE BY:	APPLIES TO:
Story height[b] (Section 301.3)		10 ft	1.0	All bracing methods - R602.10.2
		> 10 12 ft	1.2	
Braced wall line spacing in SDC A-C[b,d]		35 ft	1.0	
		> 35 50 ft	1.43	
Wall dead load[c]		> 8 15	1.0	
		8 psf	0.85	
Roof/ceiling dead load for wall supporting [b,c]	roof only or roof plus one story	15 psf	1.0	
	roof only	> 15 psf 25 psf	1.1	
	roof plus one story	> 15 psf 25 psf	1.2	
Walls with stone or masonry veneer in SDC C-D_2		See Section R703.7, Exception 1-4		
Cripple walls		See Section R 602.10.8		

a. The total percentage of bracing required for a given wall line is the product of all applicable adjustment factors.
b. Linear interpolation shall be permitted.
c. Bracing required for a site's wind speed shall not be adjusted for dead load.
d. Braced wall line spacing in excess of 35-ft shall be in accordance with R602.10.1.4.
e. The adjusted percentage of bracing shall not be less than that required for the site's wind speed.

R602.10.1.2 ANGLED CORNERS. AT CORNERS, BRACED WALL LINES SHALL BE PERMITTED TO ANGLE OUT OF PLANE UP TO 45 DEGREES WITH A MAXIMUM DIAGONAL LENGTH OF 8 FEET (2438 MM). WHEN DETERMINING THE PERCENTAGE OF BRACING, THE LENGTH OF EACH BRACED WALL LINE SHALL BE DETERMINED AS SHOWN IN FIGURE R602.10.1.2. THE PLACEMENT OF BRACING FOR THE BRACED WALL LINES SHALL BEGIN AT THE POINT WHERE THE BRACED WALL LINE, WHICH CONTAINS THE ANGLED WALL ADJOINS THE ADJACENT BRACED WALL LINE (POINT A AS SHOWN IN FIGURE R602.10.1.2). WHERE AN ANGLED CORNER IS CONSTRUCTED AT AN ANGLE EQUAL TO 45 DEGREES AND THE DIAGONAL LENGTH IS NO MORE THAN 8 FEET (2438 MM) IN LENGTH, THE ANGLED WALL MAY BE CONSIDERED AS PART OF EITHER OF THE ADJOINING BRACED WALL LINES, BUT

NOT BOTH. WHERE THE DIAGONAL LENGTH IS GREATER THAN 8 FEET (2438 MM), IT SHALL BE CONSIDERED ITS OWN BRACED WALL LINE AND BE BRACED IN ACCORDANCE WITH SECTION R602.10.1 AND METHODS IN SECTION R602.10.2.

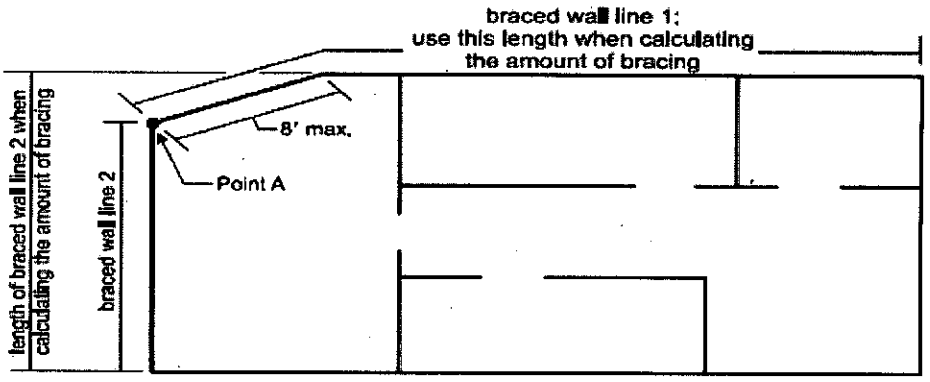


FIGURE R602.10.1.2
ANGLED CORNERS

R602.10.1.3 BRACED WALL PANEL LOCATION. BRACED WALL PANELS SHALL BE LOCATED IN ACCORDANCE WITH TABLE R602.10.1(1) AND FIGURE R602.10.1.3(1). BRACED WALL PANELS SHALL BE LOCATED AT LEAST EVERY 25 FEET ON CENTER AND SHALL BEGIN NO MORE THAN 12.5 FEET (3810 MM) FROM EACH END OF A BRACED WALL LINE IN ACCORDANCE WITH FIGURE R602.10.1.3(2). BRACED WALL PANELS MAY BE OFFSET OUT-OF-PLANE UP TO 4 FEET (1219 MM) PROVIDED THAT THE TOTAL OUT-TO-OUT OFFSET IN ANY BRACED WALL LINE IS NOT MORE THAN 8 FEET (2438 MM) IN ACCORDANCE WITH FIGURE R602.10.1.3(3).

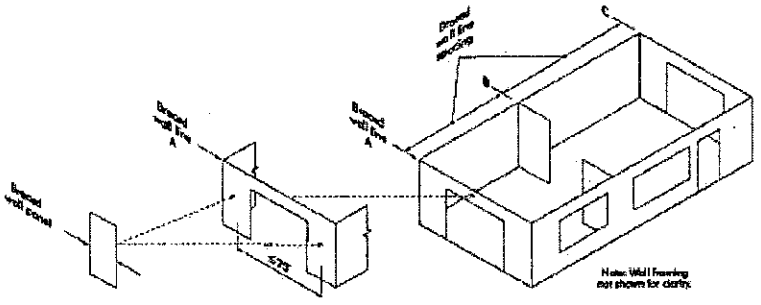


FIGURE R602.10.1.3 (1)
BRACED WALL PANELS AND BRACED WALL LINES

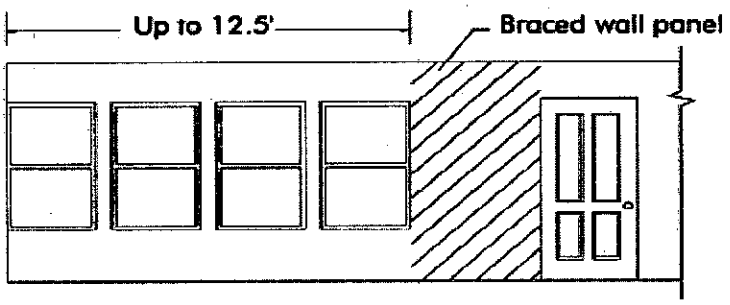


FIGURE R602.10.1.3(2)
PERMITTED BRACED WALL PANEL DISTANCES FROM ENDS OF
A BRACED WALL LINE (SDC A, B and C)

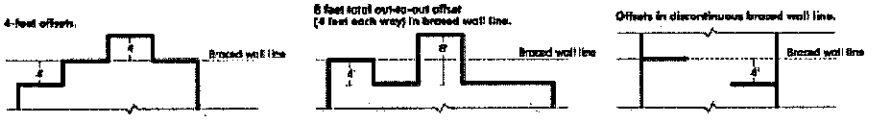


FIGURE R602.10.1.3(3)
OFFSETS PERMITTED FOR BRACED WALL LINES

R602.10.1.4 BRACED WALL LINE SPACING. SPACING OF BRACED WALL LINES SHALL NOT EXCEED 35 FEET (10668 MM) ON CENTER IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTION IN EACH STORY.

EXCEPTION: SPACING OF BRACED WALL LINES NOT EXCEEDING 50 FEET (15240 MM) SHALL BE PERMITTED WHERE:

1. THE WALL BRACING PROVIDED EQUALS OR EXCEEDS THE PERCENTAGE OF BRACING REQUIRED BY TABLE R602.10.1(1) MULTIPLIED BY A FACTOR EQUAL TO THE BRACED WALL LINE SPACING DIVIDED BY 35 FEET (10668 MM); AND
2. THE LENGTH-TO-WIDTH RATIO FOR THE FLOOR/ROOF DIAPHRAGM AS MEASURED BETWEEN BRACED WALL LINES DOES NOT EXCEED 3:1.

R602.10.2 BRACED WALL PANEL CONSTRUCTION METHODS. THE CONSTRUCTION OF BRACED WALL PANELS SHALL BE IN ACCORDANCE WITH ONE OF THE FOLLOWING METHODS:

1. NOMINAL 1-INCH-BY-4-INCH (19.1 MM BY 88.9 MM) CONTINUOUS DIAGONAL BRACES LET IN TO THE TOP AND BOTTOM PLATES AND THE INTERVENING STUDS OR APPROVED METAL STRAP DEVICES INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS. THE LET-IN BRACING SHALL BE PLACED AT AN ANGLE NOT MORE THAN 60 DEGREES (1.06 RAD) OR LESS THAN 45 DEGREES (0.79 RAD) FROM THE HORIZONTAL.
2. WOOD BOARDS OF 5/8-INCH (15.9 MM) NET MINIMUM THICKNESS APPLIED DIAGONALLY ON STUDS SPACED A MAXIMUM OF 24 INCHES (610 MM). DIAGONAL BOARDS

SHALL BE ATTACHED TO STUDS IN ACCORDANCE WITH TABLE R602.3(1).

3. WOOD STRUCTURAL PANEL SHEATHING WITH A THICKNESS NOT LESS THAN 3/8 INCH (9.5 MM) FOR 16-INCH (406 MM) OR 24-INCH (610 MM) STUD SPACING. WOOD STRUCTURAL PANELS SHALL BE INSTALLED IN ACCORDANCE WITH TABLE R602.3(3) AND TABLE R602.3(1).

4. ONE-HALF-INCH (12.7 MM) OR 25/32-INCH (19.8 MM) THICK STRUCTURAL FIBERBOARD SHEATHING APPLIED VERTICALLY OR HORIZONTALLY ON STUDS SPACED A MAXIMUM OF 16 INCHES (406 MM) ON CENTER. STRUCTURAL FIBERBOARD SHEATHING SHALL BE INSTALLED IN ACCORDANCE WITH TABLE R602.3(1).

5. GYPSUM BOARD WITH MINIMUM 1/2-INCH (12.7 MM) THICKNESS PLACED ON STUDS SPACED A MAXIMUM OF 24 INCHES (610 MM) ON CENTER AND FASTENED AT PANEL EDGES INCLUDING TOP AND BOTTOM PLATES AT 7 INCHES (178 MM) ON CENTER WITH THE SIZE NAILS SPECIFIED IN TABLE R602.3(1) FOR SHEATHING AND TABLE R702.3.5 FOR INTERIOR GYPSUM BOARD.

6. PARTICLEBOARD WALL SHEATHING PANELS INSTALLED IN ACCORDANCE WITH TABLE R602.3(4) AND TABLE R602.3(1).

7. PORTLAND CEMENT PLASTER ON STUDS SPACED A MAXIMUM OF 16 INCHES (406 MM) ON CENTER AND INSTALLED IN ACCORDANCE WITH SECTION R703.6.

8. HARDBOARD PANEL SIDING WHEN INSTALLED IN ACCORDANCE WITH TABLE R703.4.

EXCEPTION: ALTERNATE BRACED WALL PANELS CONSTRUCTED IN ACCORDANCE WITH SECTIONS R602.10.3.2.1 OR R602.10.3.2.2 SHALL BE PERMITTED TO REPLACE ANY BRACED WALL PANEL IN ANY OF THE ABOVE METHODS OF BRACED WALL PANELS.

R602.10.2.1 BRACED WALL PANEL INTERIOR FINISH MATERIAL. BRACED WALL PANELS SHALL HAVE GYPSUM WALL BOARD INSTALLED ON THE SIDE OF THE WALL OPPOSITE THE BRACING MATERIAL. GYPSUM WALL BOARD SHALL BE NOT LESS THAN 1/2 INCH (12.7 MM) IN THICKNESS AND BE FASTENED IN ACCORDANCE WITH TABLE R702.3.5 FOR INTERIOR GYPSUM WALL BOARD.

EXCEPTIONS:

1. WALL PANELS THAT ARE BRACED IN ACCORDANCE WITH METHOD 5.
2. WALL PANELS THAT ARE BRACED IN ACCORDANCE WITH SECTION R602.10.3.2.

3. WHEN AN APPROVED INTERIOR FINISH MATERIAL WITH AN IN-PLANE SHEAR RESISTANCE EQUIVALENT TO GYPSUM BOARD IS INSTALLED.

4. FOR METHODS 2, 3, 4, 6, 7 AND 8, GYPSUM WALL BOARD IS PERMITTED TO BE OMITTED PROVIDED THE PERCENTAGE OF BRACING IN TABLE R602.10.1(1) IS MULTIPLIED BY A FACTOR OF 1.5.

R602.10.3 MINIMUM LENGTH OF BRACED PANELS. FOR METHODS 2, 3, 4, 6, 7 AND 8 ABOVE, EACH BRACED WALL PANEL SHALL BE AT LEAST 48 INCHES (1219 MM) IN LENGTH, COVERING A MINIMUM OF THREE STUD SPACES WHERE STUDS ARE SPACED 16 INCHES (406 MM) ON CENTER AND COVERING A MINIMUM OF TWO STUD SPACES WHERE STUDS ARE SPACED 24 INCHES (610 MM) ON CENTER. FOR METHOD 5 ABOVE, EACH BRACED WALL PANEL AND SHALL BE AT LEAST 96 INCHES (2438 MM) IN LENGTH WHERE APPLIED TO ONE FACE OF A BRACED WALL PANEL AND AT LEAST 48 INCHES (1219 MM) WHERE APPLIED TO BOTH FACES. FOR METHODS 2, 3, 4, 6, 7 AND 8, FOR PURPOSES OF COMPUTING THE PERCENTAGE OF PANEL BRACING REQUIRED IN TABLE R602.10.1(1), THE EFFECTIVE LENGTH OF THE BRACED WALL PANEL SHALL BE EQUAL TO THE ACTUAL LENGTH OF THE PANEL. WHEN METHOD 5 PANELS ARE APPLIED TO ONLY ONE FACE OF A BRACED WALL PANEL, BRACING PERCENTAGES

REQUIRED IN TABLE R602.10.1(1) FOR METHOD 5 SHALL BE DOUBLED.

EXCEPTIONS:

1. LENGTHS OF BRACED WALL PANELS FOR CONTINUOUS WOOD STRUCTURAL PANEL SHEATHING SHALL BE IN ACCORDANCE WITH SECTION R602.10.4.
2. LENGTHS OF ALTERNATE BRACED WALL PANELS SHALL BE IN ACCORDANCE WITH SECTION R602.10.3.2.1 OR SECTION R602.10.3.2.2.
3. FOR METHODS 2, 3, 4, 6, 7 AND 8 IN SEISMIC DESIGN CATEGORIES A, B AND C: PANELS BETWEEN 36 INCHES AND 48 INCHES IN LENGTH SHALL BE PERMITTED TO COUNT TOWARDS THE REQUIRED PERCENTAGE OF BRACING IN TABLE R602.10.1(1), AND THE EFFECTIVE CONTRIBUTION SHALL COMPLY WITH TABLE R602.10.3.

TABLE R602.10.3
EFFECTIVE LENGTHS FOR BRACE WALL PANELS LESS THAN 48 INCHES IN ACTUAL LENGTH (BRACE METHODS 2, 3, 4, 6, 7, AND 8[a])

	Effective Length of Braced Wall Panel (inches)		
Actual Length of Braced Wall Panel (inches)	8-foot Wall Height	9-foot Wall Height	10-foot Wall Height
48	48	48	48
42	36	36	N/A
36	27	N/A	N/A

For SI: 1 inch = 25.4mm
Interpolation shall be permitted.

R602.10.3.1 ADJUSTMENT OF LENGTH OF BRACED PANELS. WHEN STORY HEIGHT (H), MEASURED IN FT, EXCEEDS 10 FEET (3048 MM), IN ACCORDANCE WITH SECTION R301.3, THE MINIMUM LENGTH OF BRACED WALL PANELS SPECIFIED IN SECTION R602.10.3 SHALL BE INCREASED BY A FACTOR H/10. SEE TABLE R602.10.3.1. INTERPOLATION IS PERMITTED.

TABLE R602.10.3.1
MINIMUM LENGTH REQUIREMENTS FOR BRACED WALL PANELS

SEISMIC DESIGN CATEGORY AND WIND SPEED	BRACING METHOD	HEIGHT OF BRACED WALL PANEL				
		8 ft.	9 ft.	10 ft.	11 ft.	12 ft.
SDC A, B, C, D_0, D_1 and D_2 Wind speed < 110 mph	2,3,4,6,7,8 and Method 5 when double sided	4'-0"	4'-0"	4'-0"	4'-5"	4'-10"
	Method 5, single sided	8'-0"	8'-0"	8'-0"	8'-10"	9'-8"

For SI: 1 inch = 25.4mm, 1 foot = 305 mm

R602.10.3.2 ALTERNATIVE BRACING PANELS. AS AN ALTERNATE TO THE BRACING METHODS IN SECTION R602.10.2, WALL BRACING PANELS IN ACCORDANCE WITH SECTIONS R602.10.3.2.1 AND R602.10.3.2.2 SHALL BE PERMITTED.

R602.10.3.2.1 ALTERNATE BRACED WALL PANELS. ALTERNATE BRACED WALL PANELS CONSTRUCTED IN ACCORDANCE WITH ONE OF THE FOLLOWING PROVISIONS SHALL BE PERMITTED TO REPLACE EACH 4 FEET (1219 MM) OF BRACED WALL PANEL AS REQUIRED BY SECTION R602.10.3. THE MAXIMUM HEIGHT AND MINIMUM LENGTH AND TIE-DOWN FORCE OF EACH PANEL SHALL BE IN ACCORDANCE WITH TABLE R602.10.3.2.1:

1. IN ONE-STORY BUILDINGS, EACH PANEL SHALL BE SHEATHED ON ONE FACE WITH 3/8-INCH-MINIMUM-THICKNESS (9.5 MM) WOOD STRUCTURAL PANEL SHEATHING NAILED WITH 8D COMMON OR GALVANIZED BOX NAILS SPACED IN ACCORDANCE WITH TABLE R602.3(1) AND BLOCKED AT ALL WOOD STRUCTURAL PANEL SHEATHING EDGES. TWO ANCHOR BOLTS INSTALLED IN ACCORDANCE WITH FIGURE R403.1(1) SHALL BE PROVIDED IN EACH PANEL. ANCHOR BOLTS SHALL BE PLACED 6 TO 12 INCHES FROM EACH END OF THE PLATE. EACH PANEL END STUD SHALL HAVE A TIE-DOWN DEVICE FASTENED TO THE FOUNDATION, CAPABLE OF PROVIDING AN UPLIFT CAPACITY IN ACCORDANCE WITH TABLE R602.10.3.2.1. THE TIE-DOWN DEVICE SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THE PANELS SHALL BE SUPPORTED DIRECTLY ON A FOUNDATION OR ON FLOOR FRAMING SUPPORTED DIRECTLY ON A FOUNDATION, WHICH IS CONTINUOUS ACROSS THE ENTIRE LENGTH OF THE BRACED WALL LINE. THIS FOUNDATION SHALL BE REINFORCED WITH NOT LESS THAN ONE NO. 4 BAR TOP AND BOTTOM. WHEN THE CONTINUOUS FOUNDATION IS REQUIRED TO HAVE A

DEPTH GREATER THAN 12 INCHES (305 MM), A MINIMUM 12-INCH-BY-12-INCH (305 MM BY 305 MM) CONTINUOUS FOOTING OR TURNED DOWN SLAB EDGE IS PERMITTED AT DOOR OPENINGS IN THE BRACED WALL LINE. THIS CONTINUOUS FOOTING OR TURNED DOWN SLAB EDGE SHALL BE REINFORCED WITH NOT LESS THAN ONE NO. 4 BAR TOP AND BOTTOM. THIS REINFORCEMENT SHALL BE LAPPED 15 INCHES (381 MM) WITH THE REINFORCEMENT REQUIRED IN THE CONTINUOUS FOUNDATION LOCATED DIRECTLY UNDER THE BRACED WALL LINE.

2. IN THE FIRST STORY OF TWO-STORY BUILDINGS, EACH BRACED WALL PANEL SHALL BE IN ACCORDANCE WITH ITEM 1 ABOVE, EXCEPT THAT THE WOOD STRUCTURAL PANEL SHEATHING EDGE NAILING SPACING SHALL NOT EXCEED 4 INCHES ON CENTER.

TABLE R602.10.3.2.1
MINIMUM LENGTH REQUIREMENTS AND TIE-DOWN FORCES FOR ALTERNATE BRACED WALL PANELS

SEISMIC DESIGN CATEGORY AND WIND SPEED		HEIGHT OF BRACED WALL PANEL				
		8 ft.	9 ft.	10 ft.	11 ft.	12 ft.
SDC A, B and C Wind speed < 110 mph	Minimum Sheathed Length	2'-4"	2'-8"	2'-10"	3'-2"	3'-6"
	R602.10.3.2.1, Item 1 Tie-down Force (lbs)	1600	1600	1600	2000	2200
	R602.10.3.2.1, Item 2 Tie-down Force (lbs)	3000	3000	3000	3300	3600
SDC D_0, D_1 and D_2 Wind speed < 110 mph	Minimum Sheathed Length	2'-8"	2'-8"	2'-10"	NP[a]	NP[a]
	R602.10.3.2.1, Item 1 Tie-down Force (lbs)	1600	1600	1600	NP[a]	NP[a]
	R602.10.3.2.1, Item 2 Tie-down Force (lbs)	3000	3000	3000	NP[a]	NP[a]

For SI: 1 inch = 25.4 mm, 1 foot = 305 mm, 1 pound = 4.44822 Newtons
a. NP = Not Permitted. Maximum height of 10 feet (3,048 mm).

R602.10.3.2.2 ALTERNATE BRACING WALL PANEL ADJACENT TO A DOOR OR WINDOW OPENING. ALTERNATE BRACED WALL PANELS CONSTRUCTED IN ACCORDANCE WITH ONE OF THE FOLLOWING PROVISIONS ARE ALSO PERMITTED TO REPLACE EACH 4 FEET (1219 MM) OF BRACED WALL PANEL AS REQUIRED BY SECTION R602.10.3 FOR USE ADJACENT TO A WINDOW OR DOOR OPENING WITH A FULL-LENGTH HEADER:

1. IN ONE-STORY BUILDINGS, EACH PANEL SHALL HAVE A LENGTH OF NOT LESS THAN 16 INCHES (406 MM) AND A HEIGHT OF NOT MORE THAN 10 FEET (3048 MM). EACH PANEL SHALL BE SHEATHED ON ONE FACE WITH A SINGLE LAYER OF 3/8-INCH MINIMUM-THICKNESS (9.5 MM) WOOD STRUCTURAL PANEL SHEATHING NAILED WITH 8D COMMON OR GALVANIZED BOX NAILS IN ACCORDANCE WITH FIGURE R602.10.3.2.2. THE WOOD STRUCTURAL PANEL SHEATHING SHALL EXTEND UP OVER THE SOLID SAWN OR GLUED-LAMINATED HEADER AND SHALL BE NAILED IN ACCORDANCE WITH FIGURE R602.10.3.2.2. A BUILT-UP HEADER CONSISTING OF AT LEAST TWO 2 X 12S AND FASTENED IN ACCORDANCE WITH TABLE R602.3(1) SHALL BE PERMITTED TO BE USED. A SPACER, IF USED, SHALL BE PLACED ON THE SIDE OF THE BUILT-UP BEAM OPPOSITE THE WOOD STRUCTURAL PANEL SHEATHING.

THE HEADER SHALL EXTEND BETWEEN THE INSIDE FACES OF THE FIRST FULL-LENGTH OUTER STUDS OF EACH PANEL. THE CLEAR SPAN OF THE HEADER BETWEEN THE INNER STUDS OF EACH PANEL SHALL BE NOT LESS THAN 6 FEET (1829 MM) AND NOT MORE THAN 18 FEET (5486 MM) IN LENGTH. A STRAP WITH AN UPLIFT CAPACITY OF NOT LESS THAN 1000 POUNDS (4448 N) SHALL FASTEN THE HEADER TO THE SIDE OF THE INNER STUDS OPPOSITE THE SHEATHING. ONE ANCHOR BOLT NOT LESS THAN 5/8-INCH-DIAMETER (16 MM) AND INSTALLED IN ACCORDANCE WITH SECTION R403.1.6 SHALL BE PROVIDED IN THE CENTER OF EACH SILL PLATE. THE STUDS AT EACH END OF THE PANEL SHALL HAVE A TIE-DOWN DEVICE FASTENED TO THE FOUNDATION WITH AN UPLIFT CAPACITY OF NOT LESS THAN 4,200 POUNDS (18683 N). THE TIE-DOWN DEVICES SHALL BE AN EMBEDDED-STRAP TYPE, INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. WHERE A PANEL IS LOCATED ON ONE SIDE OF THE OPENING, THE HEADER SHALL EXTEND BETWEEN THE INSIDE FACE OF THE FIRST FULL-LENGTH STUD OF THE PANEL AND THE BEARING STUDS AT THE OTHER END OF THE OPENING. A STRAP WITH AN UPLIFT CAPACITY OF NOT LESS THAN

1,000 POUNDS (4448 N) SHALL FASTEN THE HEADER TO THE BEARING STUDS. THE BEARING STUDS SHALL ALSO HAVE A TIE-DOWN DEVICE FASTENED TO THE FOUNDATION WITH AN UPLIFT CAPACITY OF NOT LESS THAN 1,000 POUNDS (4448 N). THE PANELS SHALL BE SUPPORTED DIRECTLY ON A FOUNDATION, WHICH IS CONTINUOUS ACROSS THE ENTIRE LENGTH OF THE BRACED WALL LINE. THE FOUNDATION SHALL BE REINFORCED WITH NOT LESS THAN ONE NO. 4 BAR TOP AND BOTTOM. WHERE THE CONTINUOUS FOUNDATION IS REQUIRED TO HAVE A DEPTH GREATER THAN 12 INCHES (305 MM), A MINIMUM 12-INCH-BY-12-INCH (305 MM BY 305 MM) CONTINUOUS FOOTING OR TURNED DOWN SLAB EDGE IS PERMITTED AT DOOR OPENINGS IN THE BRACED WALL LINE. THIS CONTINUOUS FOOTING OR TURNED DOWN SLAB EDGE SHALL BE REINFORCED WITH NOT LESS THAN ONE NO. 4 BAR TOP AND BOTTOM. THIS REINFORCEMENT SHALL BE LAPPED NOT LESS THAN 15 INCHES (381 MM) WITH THE REINFORCEMENT REQUIRED IN THE CONTINUOUS FOUNDATION LOCATED DIRECTLY UNDER THE BRACED WALL LINE.

2. IN THE FIRST STORY OF TWO-STORY BUILDINGS, EACH WALL PANEL SHALL BE BRACED IN ACCORDANCE WITH

ITEM 1 ABOVE, EXCEPT THAT EACH PANEL SHALL HAVE A LENGTH OF NOT LESS THAN 24 INCHES (610 MM).

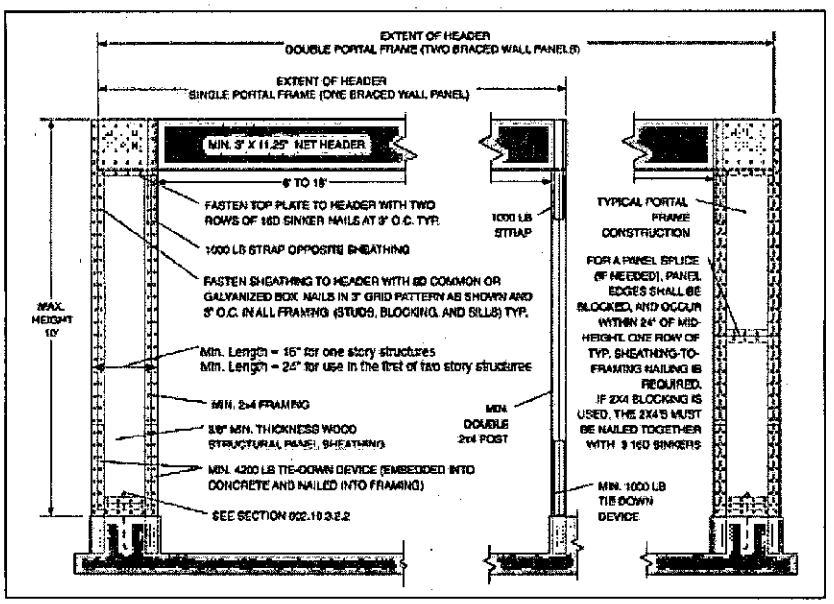


FIGURE R602.10.3.2.2
ALTERNATE BRACED WALL PANEL ADJACENT TO A DOOR OR WINDOW OPENING

For SI: 1 inch = 25.4 mm, 1 foot = 305 mm

R602.10.4 CONTINUOUSLY-SHEATHED BRACED WALL LINE USING METHOD 3 (WOOD STRUCTURAL PANEL). CONTINUOUSLY-SHEATHED BRACED WALL LINES USING WOOD STRUCTURAL PANELS SHALL COMPLY WITH THIS SECTION. DIFFERENT BRACING METHODS SHALL NOT BE PERMITTED WITHIN A CONTINUOUSLY-SHEATHED BRACED WALL LINE. OTHER BRACING METHODS PRESCRIBED BY THIS CODE SHALL BE PERMITTED ON OTHER BRACED WALL LINES ON THE SAME STORY LEVEL OR ON DIFFERENT STORY LEVELS OF THE

BUILDING.

EXCEPTION: ALL EXTERIOR BRACED WALL LINES SHALL BE CONTINUOUSLY SHEATHED WHERE REQUIRED BY SECTION R602.10.4.7.

R602.10.4.1 CONTINUOUSLY-SHEATHED BRACED WALL LINE REQUIREMENTS. CONTINUOUSLY-SHEATHED BRACED WALL LINES SHALL BE IN ACCORDANCE WITH FIGURE R602.10.4(1) AND SHALL COMPLY WITH ALL OF THE FOLLOWING REQUIREMENTS:

1. STRUCTURAL SHEATHING SHALL BE APPLIED TO ALL EXTERIOR SHEATHABLE SURFACES OF A BRACED WALL LINE INCLUDING AREAS ABOVE AND BELOW OPENINGS.
2. ONLY FULL-HEIGHT BRACED WALL PANELS SHALL BE USED FOR CALCULATING THE BRACED WALL PERCENTAGE IN ACCORDANCE WITH TABLE R602.10.1(1).

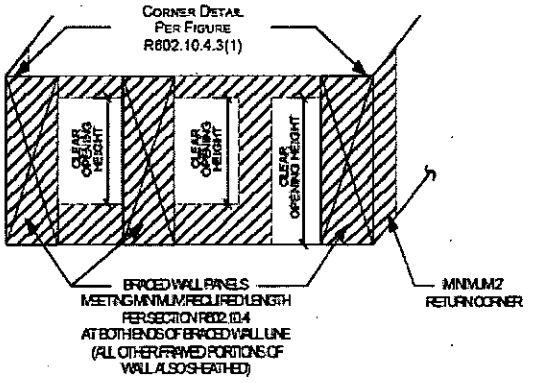


FIGURE R602.10.4(1)
CONTINUOUSLY-SHEATHED BRACED WALL LINE

R602.10.4.2 BRACED WALL PANEL LENGTH. IN A CONTINUOUSLY-SHEATHED WOOD STRUCTURAL PANEL BRACED WALL LINE, THE MINIMUM BRACED WALL PANEL LENGTH SHALL BE PERMITTED TO BE IN ACCORDANCE WITH TABLE R602.10.4.2.

TABLE R602.10.4.2
LENGTH REQUIREMENTS FOR BRACED WALL PANELS IN A CONTINUOUSLY SHEATHED WALL [a]

MINIMUM LENGTH OF BRACED WALL PANEL (inches)			MINIMUM OPENING CLEAR HEIGHT NEXT TO THE BRACED WALL PANEL (% of wall height)
8-foot wall	9-foot wall	10-foot wall	
48	54	60	100%
32	36	40	85%
24	27	30	67%

For SI: 1 inch = 25.4 mm, 1 foot = 305 mm
a. Interpolation shall be permitted.

R602.10.4.3 BRACED WALL PANEL LOCATION AND CORNER CONSTRUCTION. A BRACED WALL PANEL SHALL BE LOCATED AT EACH END OF A CONTINUOUSLY-SHEATHED BRACED WALL LINE. A MINIMUM 24-INCH (610 MM) WOOD STRUCTURAL PANEL CORNER RETURN SHALL BE PROVIDED AT BOTH ENDS OF A CONTINUOUSLY-SHEATHED BRACED WALL LINE IN ACCORDANCE WITH FIGURE R602.10.4.3(1). IN LIEU OF THE CORNER RETURN, A TIE-DOWN DEVICE WITH A MINIMUM UPLIFT DESIGN VALUE OF 800 LB SHALL BE FASTENED TO THE CORNER STUD AND TO THE FOUNDATION OR FRAMING BELOW IN ACCORDANCE WITH FIGURE R602.10.4.3(2).

EXCEPTION: THE FIRST BRACED WALL PANEL SHALL BE

PERMITTED TO BEGIN 12 FEET 6 INCHES (3810 MM) FROM EACH END OF THE BRACED WALL LINE IN SEISMIC DESIGN CATEGORIES A, B AND C AND 8 FEET IN SEISMIC DESIGN CATEGORIES D0, D1 AND D2 PROVIDED ONE OF THE FOLLOWING IS SATISFIED:

1. A MINIMUM 2-FOOT-LONG (610 MM), FULL-HEIGHT WOOD STRUCTURAL PANEL IS PROVIDED AT BOTH SIDES OF A CORNER CONSTRUCTED IN ACCORDANCE WITH FIGURE R602.10.4.3(1) AT THE BRACED WALL LINE ENDS IN ACCORDANCE WITH FIGURE R602.10.4.3(3); OR
2. THE BRACED WALL PANEL CLOSEST TO THE CORNER SHALL HAVE A TIE-DOWN DEVICE WITH A MINIMUM UPLIFT DESIGN VALUE OF 800 LB (36 KG) FASTENED TO THE STUD AT THE EDGE OF THE BRACED WALL PANEL CLOSEST TO THE CORNER AND TO THE FOUNDATION OR FRAMING BELOW IN ACCORDANCE WITH FIGURE R602.10.4.3(4).

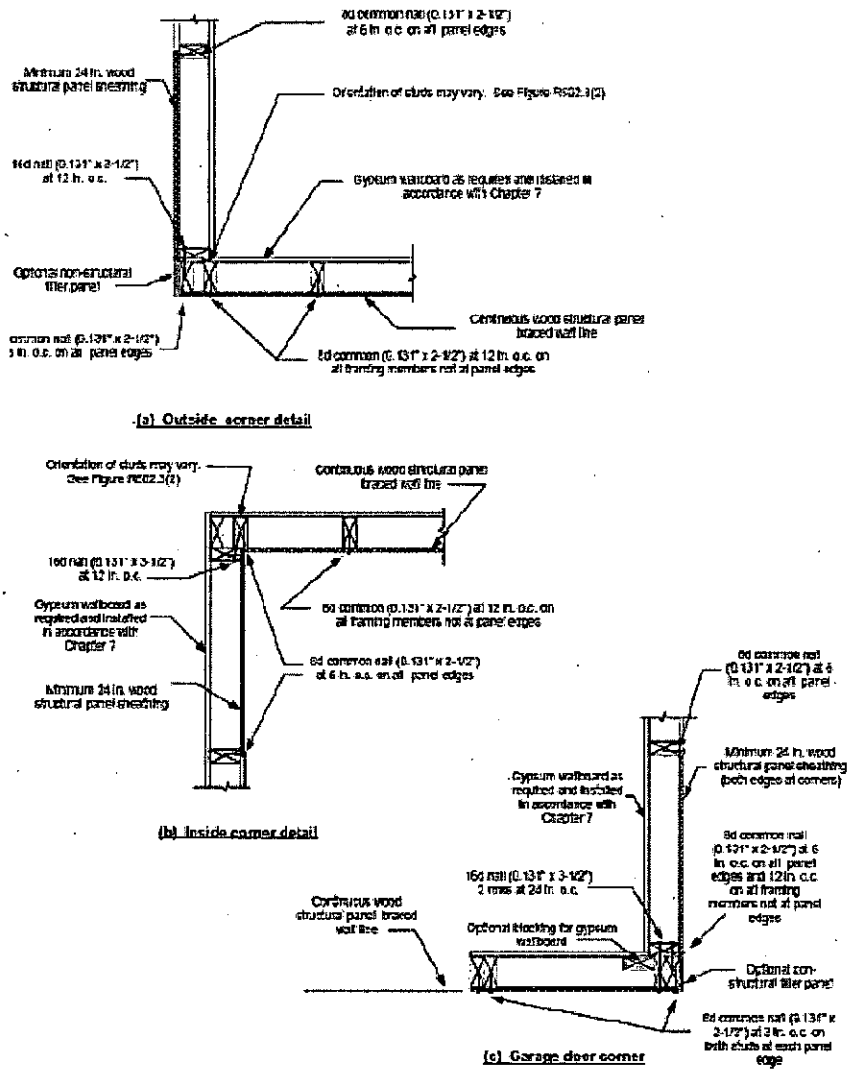


FIGURE R602.10.4.3(1)
TYPICAL EXTERIOR CORNER FRAMING FOR CONTINUOUS STRUCTURAL PANEL SHEATHING SHOWING REQUIRED STUD-TO-STUD NAILING

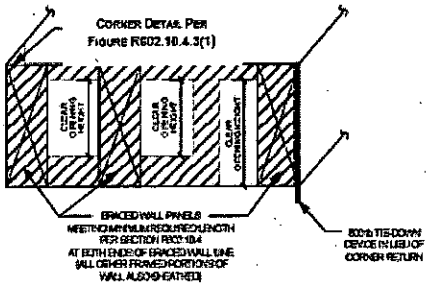


FIGURE R602.10.4.3(2)
CONTINUOUSLY SHEATHED BRACED WALL LINE – WITHOUT CORNER RETURN

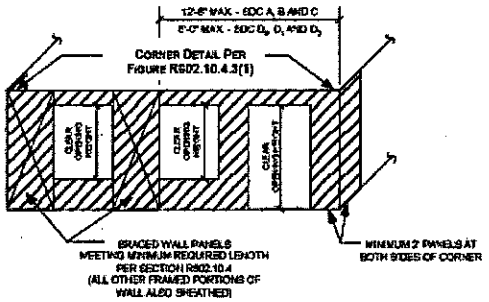


FIGURE R602.10.4.3(3)
CONTINUOUSLY SHEATHED BRACED WALL LINE – FIRST
BRACED WALL PANEL AWAY FROM END OF WALL LINE WITHOUT TIE DOWN

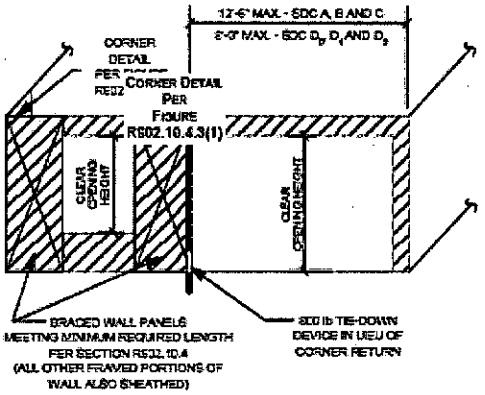


FIGURE R602.10.4.3(4)
CONTINUOUSLY SHEATHED BRACED WALL LINE – FIRST BRACED
WALL PANEL AWAY FROM END OF WALL LINE WITH TIE DOWN

R602.10.4.4 BRACED WALL PERCENTAGE. IN ADDITION TO BRACING PERCENTAGE ADJUSTMENTS SPECIFIED ELSEWHERE

IN THIS CODE, THE BRACED WALL PERCENTAGES FOR METHOD 3 FROM TABLE 602.10.1(1) SHALL BE PERMITTED TO BE MULTIPLIED BY A FACTOR IN ACCORDANCE WITH TABLE R602.10.4.4.

TABLE R602.10.4.4
ADJUSTMENT FACTORS TO THE PERCENTAGE OF REQUIRED BRACING PER WALL LINE – CONTINUOUSLY SHEATHED

ADJUSTMENT BASED ON MAXIMUM WALL CLEAR OPENING HEIGHT:		MULTIPLY PERCENTAGE OF BRACING PER WALL LINE BY:
Continuous wood structural panel sheathing when maximum opening height in wall line does not exceed [a] (Section 301.2.2.2.1)	85% of wall height	0.9
	67% of wall height	0.8

a. Percentage of bracing for continuous wood structural panel sheathing shall be based on Method 3 requirements.

R602.10.4.5 4:1 ASPECT RATIO SEGMENTS AT GARAGE DOOR OPENINGS USED WITH CONTINUOUS STRUCTURAL PANEL SHEATHING. A 4:1 ASPECT RATIO SHALL BE PERMITTED FOR FULL-HEIGHT SHEATHED WALL SEGMENTS ON EITHER SIDE OF GARAGE OPENINGS THAT SUPPORT LIGHT FRAME ROOFS ONLY, WITH ROOF COVERING DEAD LOADS OF 3 PSF (0.14 KN/M2) OR LESS. FOR PURPOSES OF CALCULATING THE PERCENTAGE OF PANEL BRACING REQUIRED BY TABLE R602.10.1(1), THE LENGTH OF THE FULL-HEIGHT SHEATHING SEGMENT SHALL BE EQUAL TO ITS MEASURED LENGTH. THIS OPTION IS LIMITED TO ONE WALL OF THE GARAGE.

R602.10.4.6 6:1 ASPECT RATIO SEGMENTS USED WITH CONTINUOUS STRUCTURAL PANEL SHEATHING. WALL

SEGMENTS HAVING A MAXIMUM 6:1 HEIGHT-TO-WIDTH RATIO SHALL BE PERMITTED TO BE BUILT IN ACCORDANCE WITH FIGURE R602.10.4.6. THE MAXIMUM 6:1 HEIGHT-TO-WIDTH RATIO IS BASED ON HEIGHT BEING MEASURED FROM TOP OF HEADER TO THE BOTTOM OF THE WALL SEGMENT BOTTOM-PLATE. FOR PURPOSES OF CALCULATING THE PERCENTAGE OF PANEL BRACING REQUIRED BY TABLE R602.10.1(1), THE WIDTH OF THE FULL-HEIGHT SHEATHING SEGMENT SHALL BE EQUAL TO ITS MEASURED WIDTH. CORNERS AT THE ENDS OF WALLS USING THIS OPTION SHALL BE CONSTRUCTED IN ACCORDANCE WITH FIGURE R602.10.4.3(1). THE REDUCTION FACTORS FOR CONTINUOUSLY BRACED WALLS FROM SECTION R602.10.4.4 SHALL BE APPLIED WHEN CALCULATING APPLICABLE PERCENTAGES OF WALL BRACING. THE NUMBER OF WALL SEGMENTS HAVING A MAXIMUM 6:1 HEIGHT-TO-WIDTH RATIO IN A WALL LINE SHALL NOT EXCEED FOUR. IN MULTI-STORY BUILDINGS, WALL SEGMENTS HAVING A MAXIMUM 6:1 HEIGHT-TO-WIDTH RATIO ARE NOT PERMITTED TO BE DIRECTLY STACKED VERTICALLY. FOR PURPOSES OF RESISTING WIND PRESSURES ACTING PERPENDICULAR TO THE WALL, IN ACCORDANCE WITH SECTION R301.2, THE MINIMUM REQUIREMENTS OF FIGURE R602.10.4.6 SHALL BE SUFFICIENT FOR WIND SPEEDS LESS THAN 110 MPH IN EXPOSURE CATEGORY

B. FOR EXPOSURE CATEGORIES C AND D, THE HEADER TO JACK STUD STRAP REQUIREMENTS AND THE NUMBER OF ADDITIONAL JACK STUDS SHALL BE IN ACCORDANCE WITH TABLE R602.10.4.6.

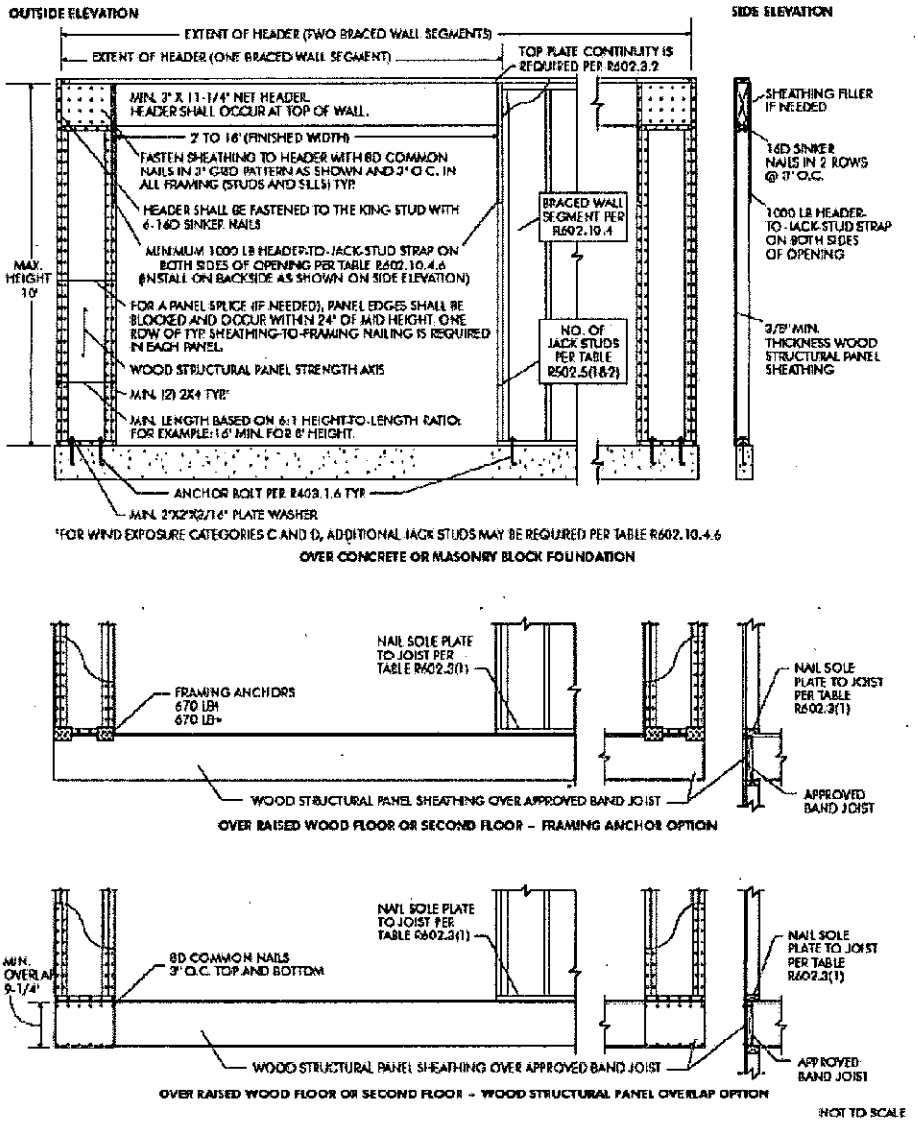


FIGURE R602.10.4.6
WALLS WITH 6:1 ASPECT RATIO USED WITH CONTINUOUS WOOD STRUCTURAL PANEL SHEATHING

TABLE R602.10.4.6
HEADER TO JACK STUD STRAP AND THE NUMBER OF ADDITIONAL JACK STUDS REQUIRED FOR RESISTING WIND PRESSURES PERPENDICULAR TO 6:1 ASPECT RATIO WALLS LOCATED IN WIND EXPOSURE CATEGORIES C AND D

Required	Wall Height (ft)	Wind Exposure Category C			Wind Exposure Category D		
		85 mph	90 mph	less than 110 mph	85 mph	90 mph	less than 110 mph
Strap Capacity(lb)[a]	10 and less	1000	1200	2275	1375	1750	3050
Number of additional 2x4 Jack Studs[b]	8	--	--	--	--	--	1
	9	--	--	1	--	1	2
	10	--	1	2	1	2	3

a. If 2x6 framing is used, then the required strap capacity may be multiplied by 0.65, but in no case shall the required strap capacity be less than 1,000 lb.
b. If 2x6 framing is used, then no additional framing shall be required.

R602.10.5 BRACED WALL PANEL SUPPORT. BRACED WALL PANELS SHALL BE SUPPORTED ON FLOOR FRAMING OR FOUNDATIONS AS FOLLOWS:

1. WHERE JOISTS ARE PERPENDICULAR TO BRACED WALL LINES ABOVE OR BELOW, BLOCKING SHALL BE PROVIDED BETWEEN THE JOISTS AT BRACED WALL PANEL LOCATIONS TO PERMIT FASTENING OF WALL PLATES IN ACCORDANCE WITH TABLE R602.3(1).
2. WHERE JOISTS ARE PARALLEL TO BRACED WALL LINES ABOVE OR BELOW, A RIM JOIST OR OTHER PARALLEL FRAMING MEMBER SHALL BE PROVIDED AT THE WALL TO PERMIT FASTENING OF WALL PLATES IN ACCORDANCE WITH TABLE R602.3(1).
3. BRACED WALL PANELS SHALL BE PERMITTED TO BE SUPPORTED ON CANTILEVERED FLOOR JOISTS MEETING THE CANTILEVER LIMITS OF SECTION R502.3.3 PROVIDED JOISTS ARE BLOCKED AT THE NEAREST BEARING WALL

LOCATION, EXCEPT SUCH BLOCKING SHALL NOT BE REQUIRED IN SEISMIC DESIGN CATEGORIES A, B AND C FOR CANTILEVERS NOT EXCEEDING 24 INCHES (610 MM) WHERE A FULL-HEIGHT RIM JOIST IS PROVIDED.

4. ELEVATED POST OR PIER FOUNDATIONS SUPPORTING BRACED WALL PANELS SHALL BE DESIGNED IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICE.

R602.10.6 INTERIOR BRACED WALL SUPPORT. IN SEISMIC DESIGN CATEGORIES A THROUGH D1, INTERIOR BRACED WALL LINES SHALL BE SUPPORTED AS PROVIDED IN SECTION R502.4.

R602.10.7 PANEL JOINTS. ALL VERTICAL JOINTS OF PANEL SHEATHING SHALL OCCUR OVER AND BE FASTENED TO COMMON STUDS. HORIZONTAL JOINTS IN BRACED WALL PANELS SHALL OCCUR OVER AND BE FASTENED TO COMMON BLOCKING OF A MINIMUM 1-1/2 INCH (38 MM) THICKNESS.

EXCEPTIONS:

1. BLOCKING AT HORIZONTAL JOINTS SHALL NOT BE REQUIRED IN WALL SEGMENTS THAT ARE NOT COUNTED AS BRACED WALL PANELS.
2. WHERE THE BRACING PERCENTAGE PROVIDED IS AT LEAST TWICE THE MINIMUM PERCENTAGE REQUIRED BY TABLE R602.10.1(1) BLOCKING AT HORIZONTAL JOINTS SHALL NOT BE REQUIRED IN

BRACED WALL PANELS CONSTRUCTED USING METHODS 3, 4, 5, 6 OR 8.

R602.10.8 CRIPPLE WALL BRACING. IN SEISMIC DESIGN CATEGORIES OTHER THAN D2, CRIPPLE WALLS SHALL BE BRACED WITH A PERCENTAGE AND TYPE OF BRACING AS REQUIRED FOR THE WALL ABOVE IN ACCORDANCE WITH TABLE R602.10.1(1) WITH THE FOLLOWING MODIFICATIONS FOR CRIPPLE WALL BRACING:

1. THE PERCENTAGE OF BRACING AS DETERMINED FROM TABLE R602.10.1(1) SHALL BE MULTIPLIED BY A FACTOR OF 1.15; AND
2. THE WALL PANEL SPACING SHALL BE DECREASED TO 18 FEET (5486 MM) INSTEAD OF 25 FEET (7620 MM).

R602.10.8.1 REDESIGNATION OF CRIPPLE WALLS. IN ANY SEISMIC DESIGN CATEGORY, CRIPPLE WALLS SHALL BE PERMITTED TO BE REDESIGNATED AS THE FIRST STORY WALLS FOR PURPOSES OF DETERMINING WALL BRACING REQUIREMENTS. IF THE CRIPPLE WALLS ARE REDESIGNATED, THE STORIES ABOVE THE REDESIGNATED STORY SHALL BE COUNTED AS THE SECOND AND THIRD STORIES RESPECTIVELY.

R602.11 WALL ANCHORAGE. BRACED WALL LINE SILLS SHALL BE ANCHORED TO CONCRETE OR MASONRY FOUNDATIONS IN ACCORDANCE WITH SECTIONS R403.1.6 AND R602.11.1."

([23]22) New Subsection R703.9.3 is added as follows:

"R703.9.3 Special inspections. Special inspections shall be required for all EIFS applications.

Exceptions:

1. Special inspections shall not be required for EIFS applications installed over a water-resistive barrier with a means of draining moisture to the exterior.
2. Special inspections shall not be required for EIFS applications installed over masonry or concrete walls."

([24]23) New Subsection R903.4.2 is added as follows:

"R903.4.2 Gutters and leaders. Gutters and leaders shall be installed in accordance with the Harford County Plumbing Code. All rain leaders or extensions shall not discharge closer than 10 feet from any lot line so as not to be a nuisance to surrounding properties."

([25]24) New Subsection R90[5.2.8.6]3.2.2 is added as follows:

"R90[5.2.8.6]3.2.2 Drip edge. Provide drip edge at eaves and gables of shingle roofs. Overlap to be a minimum of 2 inches (51 mm). Eave drip edges shall extend ¼ inches (6.4 mm) below sheathing and extend back on the roof a minimum of 2 inches (51 mm). Drip edge shall be mechanically fastened a maximum of 12 inches (305 mm) on center."

[(26) Table N1102.1 is amended by modifying the 4,500 - 4,999 heating degree day line with the following: "maximum glazing U-factor - 0.4; ceilings - R-30; walls - R-13; floors - R-19; basement walls - R-11; slab perimeter R-value and depth - R-7, 2ft; crawl space walls - R-17".]

([27]25) Part VII, Chapters 25, 26, 27, 28, 29, 30, 31 and 32 are deleted and the Harford County Plumbing Code is inserted in lieu thereof.

([28]26) Part VIII, Chapters 33, 34, 35, 36, 37, 38, 39, 40, 41 and 42 are deleted and the Harford County Electrical Code is inserted in lieu thereof.

([29]27) Subsection AE101.1 is amended by deleting the sentence "These provisions shall be applicable only to a manufactured home used as a single dwelling unit installed on privately owned (nonrental) lots and shall apply to the following:" and inserting the following sentence in lieu thereof: "These provisions shall be applicable only to a manufactured home used as a single dwelling unit installed on private and rental lots and shall apply to the following:".

([30]28) Subsection AE201.1 is amended by deleting the definition of "manufactured home" and inserting the following in lieu thereof:

"**MANUFACTURED HOME**: Manufactured home means a structure, transportable in one or more sections, which in the traveling mode is eight body feet or more in width or forty body feet or more in length or, when erected on site, is three hundred twenty or more square feet, and which is built on a permanent chassis and designed to be used as a dwelling with or without a permanent foundation when connected to the required utilities, and includes the plumbing, heating, air-conditioning and electrical systems contained therein. Calculations used to determine the number of square feet in a structure will be based on the structure's exterior dimensions measured at the largest horizontal projections when erected on site. These dimensions will include all expandable room, cabinets and other projections containing interior spaces, but do not include bay windows. This term includes all structures which meet the above requirements except the size requirements and with respect to which the manufacturer voluntarily files a certification pursuant to §3282.13 and complies with the standards set forth in Part 3280.

NOTE: For mobile homes built prior to June 15, 1976, a label

certifying compliance to the standard for mobile home, NFPA 501, ANSI 119.1, in effect at the time of manufacture is required. For the purpose of these provisions, a mobile home shall be considered a manufactured home."

([31]29) Subsection AE201.1 is amended by deleting the definition of "privately owned (nonrental) lot" and inserting the following in lieu thereof:

"**PRIVATELY OWNED (NONRENTAL) LOT**: A parcel of real estate outside of a manufactured home rental community (park) where the land and the manufactured home to be installed thereon are held in common ownership."

([32]30) Subsection AE201.1 is amended by adding the following definition:

"**RENTAL LOT**: A lot or space that is rented in an approved manufactured home community or park."

([33]31) Subsection AE201.1 is amended by adding the following definition:

"**INDUSTRIALIZED BUILDING**: [In accordance with Article 83B, §6-202] AS DEFINED BY SECTION 12-301d OF THE PUBLIC SAFETY ARTICLE, of the Annotated Code of Maryland, 'industrialized building' means a building assembly or system of building subassemblies manufactured in its entirety, or in substantial part, offsite and transported to the point of use for installation or erection, with or without other specified components, as a finished building or as a part of a finished building comprising two or more industrialized building units. An industrialized building need not have electrical, plumbing, heating, ventilating, insulation or other service systems; but when such systems are installed at the offsite manufacture or assembly point they shall be deemed a part of such building assembly or system of building assemblies. Industrialized building does not

include open frame construction which can be completely inspected onsite. An 'industrialized building' does not include a mobile home."

([34]32) Section AE301 is deleted in its entirety.

([35]33) Section AE302 is deleted in its entirety.

([36]34) Section AE303 is deleted in its entirety.

([37]35) Section AE304 is deleted in its entirety.

([38]36) Subsection AE602.1 is amended by adding the phrase "or ANSI A225.1-1994" in the last line of the last paragraph after the word "designer".

[(39) Subsection AE603.1 is deleted and the following is inserted in lieu thereof:

"**AE603.1 General.** Piers constructed as indicated in Section AE602 may have heights as follows:

1. Piers 36 inches or less in height and all corner piers shall be at least 16 inches by 16 inches consisting of interlocking masonry units and shall be fully capped with minimum four inches of solid masonry unit or equivalent.
2. Piers between 36 inches and 80 inches in height shall be at least 16 inches by 16 inches consisting of interlocking masonry units and shall be filled solid with grout and reinforcement with four number five bars. One bar shall be placed in each corner cell of hollow masonry unit.
3. Cast-in-place concrete piers meeting the same size and height limitation of items Number 1 and Number 2 above may be substituted for pier construction of masonry units.
4. Piers 80 inches and higher, all support piers shall be designed by an engineer or architect licensed by the state to practice."]

Agricultural Building Permit Requirements Table

	Structures Exempt in accordance with Subsection 105.2(1) Structures not greater than 200sf NO PERMIT APPLICATION REQUIRED	Structures Exempt in accordance with Subsection 105.2(14) Agricultural Exemption NO PERMIT APPLICATION REQUIRED	Subordinate accessory use within an agricultural building provided for in Subsection 105.2(14) in accordance with Subsections 302.2 and 302.2.1. 3000 sf/750 sf Rule	Not within the scope of the Building Code
Livestock shelters or buildings, including shade structures and milking barns	X	X		
Poultry buildings or shelters	X	X		
Barns	X	X		
Storage or equipment and machinery used exclusively in agriculture	X	X		
Horticultural structures, including detached production greenhouses and crop protection shelters	X	X		
Sheds	X	X		
Grain Silos	X	X		
Stables and indoor riding arenas, whether or not open to the general public, up to 750 sf	X	X		
Agricultural retail buildings, up to 3,000 sf	X	X	X	
Farm Tours of agricultural structures with no accessory use				X
Areas used for parties and receptions within Agricultural buildings	X		X	
Private parties and receptions within an agricultural building				X
Parties and receptions within an agricultural building open to the general public, up to 750 sf			X	
Indoor dining areas for less than 30 people, up to 750 sf	X		X	
Auction houses	X		X	
Restaurants, up to 750 sf	X		X	
Private bathrooms and offices within an agricultural buildings			X	

§ 82-5. Status of building permits applied prior to effective date of this Article.

This article shall not apply to buildings for which a valid building permit was applied for prior to the effective date of this article.

§ 82-6. Saving clause.

Nothing in this chapter hereby adopted shall be construed to affect any suit or proceedings impending in any court, or any rights acquired, or liability incurred, or any cause or causes of action acquired or existing, under any act or ordinance hereby repealed, nor shall any just or legal right or remedy of any character be lost, impaired or affected by this ordinance.

Section 2. And Be It Further Enacted that this Act shall take effect 60 calendar days from the date it becomes law.

EFFECTIVE: April 21, 2008

The Council Administrator does hereby certify that fifteen (15) copies of this Bill are immediately available for distribution to the public and the press.

Barbara A. O'Connor

Council Administrator

HARFORD COUNTY BILL NO. 08-03

Brief Title 2006 International Building & Residential Code

is herewith submitted to the County Council of Harford County for enrollment as being the text as finally passed.

CERTIFIED TRUE AND CORRECT

Barbara J. O'Connor
Council Administrator

Date February 12, 2008

ENROLLED

Billy Boniface
Council President

Date February 12, 2008

BY THE COUNCIL

Read the third time.

Passed: LSD 08-04

Failed of Passage: _____

By Order

Barbara J. O'Connor
Council Administrator

Sealed with the County Seal and presented to the County Executive for approval this 13th day of February, 2008 at 3:00 p.m.

Barbara J. O'Connor
Council Administrator

BY THE EXECUTIVE

David R. Craig
COUNTY EXECUTIVE

APPROVED: Date February 19, 2008

BY THE COUNCIL

This Bill No. 08-03 having been approved by the Executive and returned to the Council, becomes law on February 19, 2008.

EFFECTIVE DATE: April 21, 2008

Barbara J. O'Connor
Barbara J. O'Connor, Council Administrator